Final Report

Kanaighat Upazila of Sylhet District, Lot-1 and 2
October 2022 to December 2024

Project title: Technical Assistance to DPHE for Strengthening Community Capacity and Arsenic Mitigation Initiatives to Ensure Drinking Water Safety for All

Implemented by: Asia Arsenic Network

Contents

Abbreviations	
AAN	Asia Arsenic Network
CAP	Community Action Plan
CBO	Community Based Organization
CLTS	Community Led Total Sanitation
CSA	Community Situation Analysis
DPHE	Department of Public Health and Engineering
DTW	Deep Tube well
HH	House Hold
HP	Hygiene Promotion
HWD	Hand Washing Device
LGI	Local Government Institution
MHP	Menstrual Hygiene Promotion
O&M	Operation and Maintenance
PRA	Participatory Rural Appraisals
PWSS	Pipe Water Supply System
RW	Ring Well
RWH	Rain Water Harvesting
SDP	Sector Development Plan
SMC	School Management Committee
TOT	Training of Trainers
UNICEF	United Nations International Childrens Emergency Fund
WASH	Water, Sanitation and Hygiene
WatSan	Water and Sanitation
WQ	Water Quality
WSP	Water Safety Plan
WWC	Ward WatSan Committee
WWD	World Water Day
WP	Water Point

1 Project overview

1.1 Introduction

Bangladesh has made substantial progress in water access, with 98.5% of the population having access to improved water supply. However, only 42.6% of households have safe drinking water, free from contaminants like arsenic and E. coli, posing serious health risks. UNICEF and its partners, including DPHE and NGOs, have implemented arsenic mitigation projects in severely affected areas, achieving significant milestones such as 163 arsenic-safe villages and six arsenic-safe unions. These efforts have inspired the Government of Bangladesh to allocate $240 million for expansion. Key objectives by 2026 include strengthening capacities for arsenic screening, ensuring equitable and sustainable water and sanitation facilities, and promoting hygiene behaviors. The Asia Arsenic Network (AAN) is spearheading efforts to transform six unions in Kanaighat upazila of Sylhet District into arsenic-safe unions, focusing on safe water access, sanitation, and community awareness. This initiative aligns with the broader goal of achieving union-wide coverage of safe drinking water, sanitation, and hygiene by leveraging community-led approaches under UNICEF's WASH program for 2022-2026.

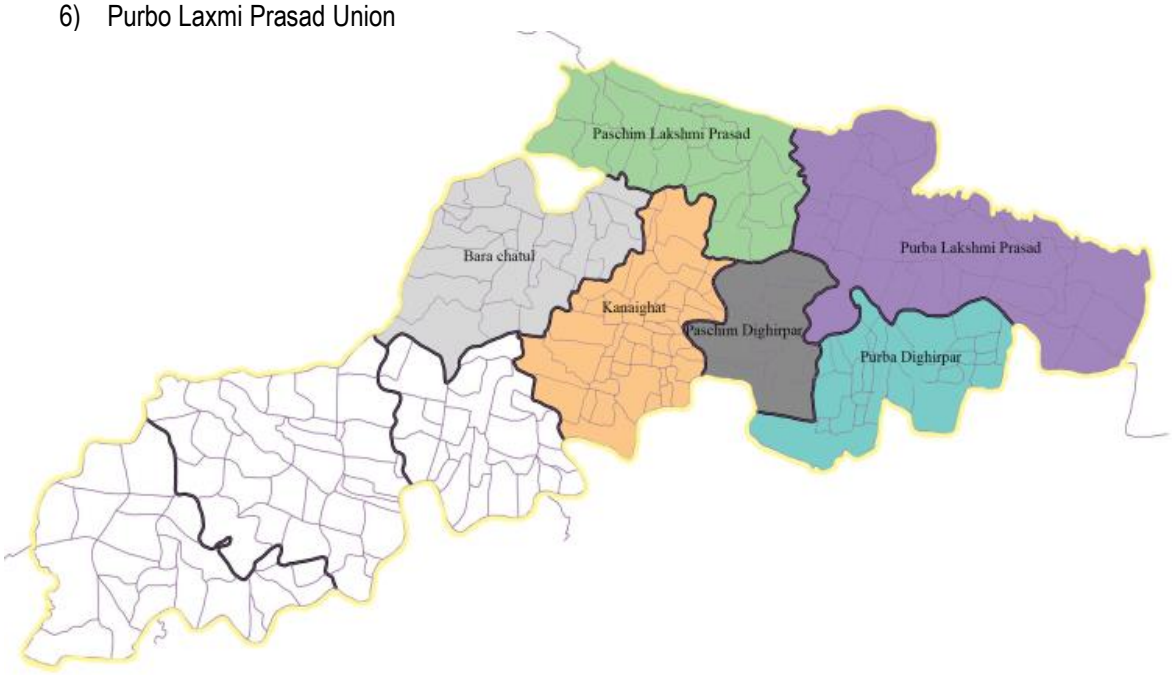
2 Descriptions of Project Location

2.1 The Geographic Coverage

The first-phase project interventions under Lot 1 (Sylhet) will be implemented in the 10 selected unions of Balaganj (4) and Kanaighat (6) upazila under Sylhet district of Sylhet division that are highly arsenic affected and are included under the DPHE's arsenic mitigation program. Upazila wise selected union names are in below table:

Kanaighat Upazila

1) Bara Chatul Union
2) Dighirpar Purbo Union
3) Paschim Laxmi Prasad Union
4) Satbak/Paschim Digirpar Union
5) Kanaighat Union
6) Purbo Laxmi Prasad Union



Targeted 6 Unions under this project marked in color

2.2 Geography with Demographical Information

Kanaighat: Kanaighat is located at 25.0166°N 92.2472°E and has a total area of 412.25 km^2. The Surma River flows through the upazila, and the Lobha River, Dhona River, Deochhai River and Chatal beel are other notable bodies of water in the area. It is bounded by the Indian state of Meghalaya and the Jaintiapur Upazila to its north, Zakiganj and Beanibazar to its south, Meghalaya to its east and Jaintapur and Golapganj to its west. Kanaighat Upazila is divided into the Kanaighat Municipality and nine union parishads, 198 mauzas, and 264 villages. Demographic information's are –

- Households – 25281
- Population - 140129 (Census-2001)
- Males constituted 50.49% of the population, and females 49.51%.

3 Programme Update

3.1 Onboarding human resources and Office Setup

Kanighat office setup was completed in November 2022 and area Managers joined from 20th October 2022 according to the contract and the remaining staff joined from 20th November as per budget allocation. The project team was divided into two groups namely the Field team and the headquarters team (HQ), field team consisted of 19 members and HQ team 4 members.

3.2 Inception Workshop/meeting

Kanaighat: The Project Inception workshop, a collaborative effort held at Kanaighat Upazila on January 25, 2023, in the Upazila Parishad conference room, marked a significant milestone in advancing project initiative. Chaired by Sumanta Banarjee, the Upazila Nirbahi Officer, the meeting saw active participation from key stakeholders including the Upazila Vice Chairman, All Union Chairmen, Secretaries, and Paniruzzaman, AE, DPHE. Mr. A.A. Kamrul Alom, WASH Officer from UNICEF's Sylhet Zonal Office, provided valuable insights. Noteworthy was the presence of the Chairman and representatives from all six Union Parishads, signifying a comprehensive engagement of local leadership. The workshop served as a platform for the detailed introduction of the project's objectives, emphasizing collaborative strategies for community capacity strengthening and arsenic mitigation. The participants engaged in discussions focusing on the allocation of resources, community involvement, and the role of Union Parishads in ensuring drinking water safety. This collaborative and inclusive approach ensures a strong foundation for the project, fostering a shared commitment to address water-related challenges and promote sustainable solutions within the Kanaighat Upazila community.

Pic-3: Inception workshop at Kanaighat Upazila

3.3 Union level rapport building and planning meeting

The Union level rapport building and planning meetings are completed in Kanaighat Upazila showcasing a remarkable confluence of stakeholders committed to the success of the WASH project. By bringing together around 30 participants from diverse backgrounds in each of the 6 targeted unions, including representatives from Union WATSAN committees, Union Parishads, and local citizens, the event transcended mere information dissemination. It transformed into a dynamic platform for open dialogue, enabling participants to share insights, voice concerns, and collectively shape the trajectory of the project.

The tangible outcomes of the meeting were particularly significant. Elected members of the Union Parishads actively engaged in drawing ward-based maps, strategically placing WASH-related information, and delineating key areas of focus. The identification of hot spots and local challenges provided a nuanced understanding of the unique dynamics in each union. The particular collection of general information not only enriched the project plan but also underscored the importance of a community-centric approach.

As the initiative moves forward, the emphasis shifts to translating the collaborative groundwork into actionable steps. Implementation will hinge on the detailed action plan crafted during the meeting, ensuring a targeted and context-specific execution. The commitment to regular follow-up meetings aims to address emerging challenges promptly, while ongoing community engagement remains central to maintaining transparency and cultivating a sense of ownership among the local populace. The incorporation of a robust monitoring and evaluation system is poised to track progress, enabling adaptive management and continual improvement. The success of this meeting, therefore, not only marks a promising beginning but sets the stage for a sustained and impactful WASH intervention in the targeted unions.

3.4 Staff Foundation and Refresher Training

Two day-long training was conducted for the newly recruited project staff at the AAN Office at Kanaighat Upazila on 24-25 December 2022.

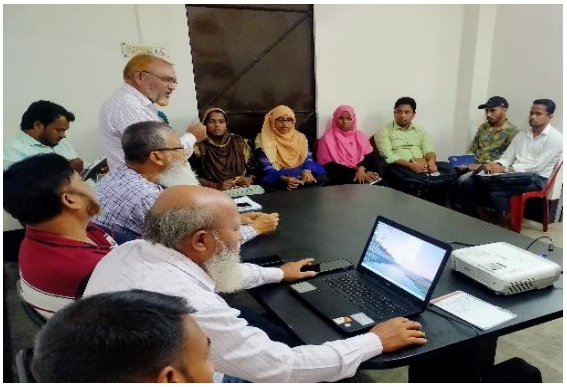
The training was conducted in classroom and field sessions, covering the following topics:

Outline of the project background, PRA and its importance and approach, CSA- Rapport building, Transect walk, Checklist, Social map, Economic condition, CBO committee formation, Community action plan, feces calculation and mobility. Safe water, Source, Contamination, WSP, Sanitation, Total Sanitation, CLTS, Hygiene, hand washing steps and risk time. SDG, Water user group, Care Taker selection, Community mobilization, hygiene domain. Roles and responsibilities of UP, DPHE, Upazila, Partner Organization, and staff.

Pic-4: Staff foundation training at Kanaighat

3.5 Refreshers Training

Two days of refresher training were conducted for the existing staff to review the field activities as well as share the working field experiences among the staff. This training was held at the AAN office at Kanaighat on 5 – 6 August 2023. To conduct this training multimedia, flip charts, whiteboards, markers, brown paper, and VIPP cards were used. The training was divided into two segments i.e. lecture session; and group work followed by a feedback session. The training was conducted in the classroom, covering the following topics.



Pic-5 Staff refreshers training at Kanaighat

Outline of the project background, Community and Community motivation, its importance, CLTS, Community participation, Facilitation, PRA tools; CSA, transect walk, checklist, Social map, economical classification, faces calculation, faces mobility, committee formation, CAP, Safe water source and contamination, WSP, Sanitation, Characteristics of Hygienic latrine,

strategy of unhygienic to hygienic latrine, Hygiene, Hygiene promotion, social norms to change hygiene behavior, hand washing importance and risk time and steps. Steps of ODF and Arsenic safe village and union declaration.

3.6 Community Situation Analysis (CSA) and CAP

Between October 2022 and March 2023, a comprehensive engagement unfolded as 140,129 villagers actively participated in Community Situation Analysis (CSA) activities organized for 259 Community-Based Organizations (CBOs) in Kanaighat Upazilas. Through CSA, a meticulous assessment identified 1134 functional water points, categorizing among functional 733 as arsenic-safe (571 Deep Tube Wells - DTWs, 162 Shallow Tube Wells - STWs), 85 as arsenic-contaminated (above 50ppb, with 55 DTWs, 30 STWs), 282 as untested tube wells, 97 as non-functional and 34 other types of water points. Moreover, the analysis revealed 18,764 households using unimproved water sources like rivers, ponds, and dug wells. CSA also identified 1209 new water points required to achieve 100% safe water coverage considering a 150-meter radius or water collection round trip of 30 minutes. After following the equity based site selection criteria and physical spot visit by the LGIs members and AAN staff 572 water point sites were confirmed and proposed. Proposed site list as annex-1

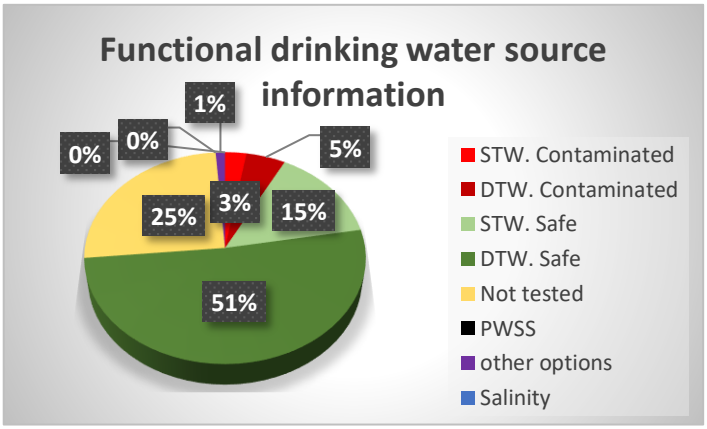


Fig-1: Functional drinking water source in Kanaighat

In terms of sanitation, 8,245 households (about 32%) were identified to be using improved toilets, while 14,856 households (59%) utilized unimproved toilet facilities, and 2,180 households (9%) lacked toilets or continued open defecation practices. Additionally, 5,273 (21%) households possessed handwashing facilities with soap, 2,571 (10%) households had facilities without soap, and 17,437 (69%) households had no handwashing facilities in total. Throughout this period, 5,721 villagers actively participated in 876 CBO meetings in updating the Community Action Plan (CAP) with project personnel assistance.

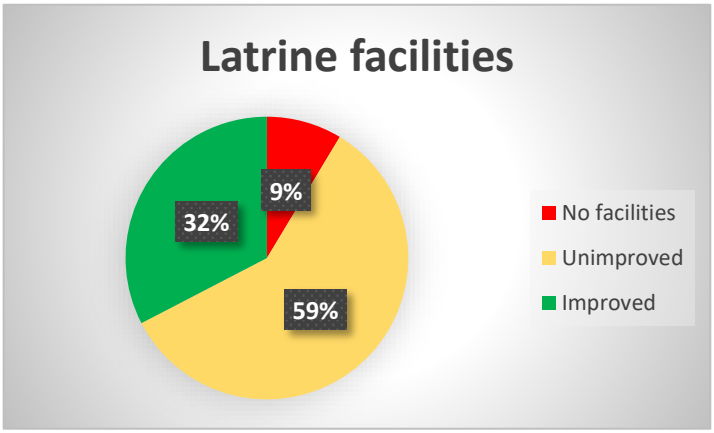


Fig-2: Latrine Facilities in Kanaighat

Remarkable steps were made during these meetings, with CBO members taking charge in improving 15,123 unimproved toilets, constructing 2,213 new latrines, and installing 17,300 and rehabilitee 667 handwashing devices through Community-Led Total Sanitation (CLTS) initiatives. Notably, 6,955 households switch to arsenic-safe tubewells, showcasing the project's significant impact on improving sanitation practices and ensuring safe water access for the communities involved (*information source monitoring format*). These accomplishments underscore a substantial step toward achieving the overarching goal of enhanced community health and well-being. The detail summary of CSA finding in Kanaighat given in below table No.01:

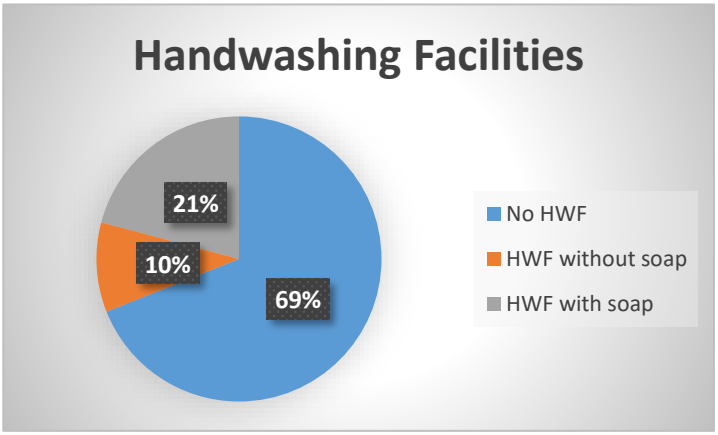


Fig-3: Handwashing Facilities in Kanaighat

Categories	Head	Kanaighat	% (where applicable)
Population	Total HH	25,281	
	Female	70,777	
	Male	69,352	
	Total	140,129	
	Children (<18 Year)	54,252	
	PwD	1,764	
Economical Category (based on CSA)	Rich	3,646	14.42%
	Middle	7,203	28.49%
	Poor	9,951	39.36%
	Extreme Poor	4,481	17.73%
Latrine facilities (in HHs numbers)	No facilities (open defecation)	2,180	8.62%
	Unimproved latrines	14,856	58.76%
	Improved latrines	8,245	32.61%
Handwashing Facilities (in HHs numbers)	HH with no handwashing facilities	17,437	68.97%
	Handwashing facilities without soap	2,571	10.16%
	Handwashing facilities with soap	5,273	20.85%
Functional Drinking Water Source Information (options in numbers)	STW - Arsenic contaminated tubewells (> 50 ppb)	30	3%
	DTW - Arsenic contaminated tubewells (> 50 ppb)	55	5%
	STW - Arsenic safe tubewell (< 50 ppb)	162	15%
	DTW - Arsenic safe tubewell (< 50 ppb)	571	51%
	Not arsenic tested tubewells	282	25%
	Pipe Water System	0	
	Others options	34	1%
	Not used for high salinity	0	
# of Water options Installed by (Ownership)	Public (GoB, NGO etc)	504	46.02%
	Private	591	53.98%
# of non functional drinking water points		97	8.55%
Drinking Tubewells without/ broken platform		145	12.78%

Categories	Head	Kanaighat	% (where applicable)
Water Users Information (HHs in numbers)	a. HHs with unimproved water sources	18,764	74.22%
	b. HHs with limited facilities	2,097	8.29%
	c. HHs with basic facilities	4,320	17.08%
	d. HHs with improved facilities (basic plus)	2,316	9.16%
	e. HHs with safely managed facilities	1,004	3.97%
	f. HHs with improved well but arsenic contaminated	14	0.05%
	g. HHs with improved well but not tested well (arsenic)	22	0.08%
# of arsenic Patients	Female Arsenicoisis	0	
	Male Arsenicoisis	0	
sRequired number of water points for 100% safe water coverage		1,209	

Table-1: CSA findings in Kanaighat, Sylhet

3.7 Facilitate equity-based site selection

AAN has successfully executed its role in supporting the Department of Public Health Engineering (DPHE) and Local Government Institutions (LGIs) in achieving equity-based allocation and site selection. Utilizing tools such as GIS mapping and agreed-upon site selection criteria, a joint field visits was conducted and facilitated discussion sessions to identify and prioritize water point installation site in the targeted areas. Also, the team collaborated effectively with UNICEF and DPHE zonal offices, overseeing the installation of point water sources to the agreed site selection protocol. This ensured the systematic and scientific approach to addressing arsenic contamination in affected areas and providing safe water solutions.

Moreover, a comprehensive support to ITN-BUET at divisional level trainings were ensured on equity-based site selection for DPHE officials from different level. The NGOs officials were mainly responsible for the session connected with community situation analysis, implementations of site selection approaches and community mobilization. At the beginning the NGOs officials were participated in a ToT program to understand the training process in ITN-BUET. A total of 41 participants joined in two batch. List of participants given in below:

Pic-6: Training on Equity based site selection at Sylhet

Batch-1		
Sl No.	Name	Designation
1	Md. Alamgir Hossain	Executive Engineer, DPHE, Sylhet
2	Md. Azad Kazi Assistant	Engineer, DPHE, Zakiganj
3	Shah Mohammad Luton	Assistant Engineer, DPHE, Golapganj
4	Mohammad Layes Miah Talukder	Assistant Engineer, DPHE, Sylhet
5	Md. Amdadul Haque	Sub-Assistant Engineer, DPHE, Sylhet Sadar
6	Md. Kamrul Hasan	Sub-Assistant Engineer, DPHE, Balaganj
7	Paniruzzaman	Assistant Engineer, DPHE, Kanaighat
8	Md. Yunus Ali	Sub-Assistant Engineer, DPHE, Gowainghat
9	Md. Sujan Mia	Sub-Assistant Engineer, DPHE, Beanibajar
10	MD.RASEL BHUIYAN	Sub-Assistant Engineer, DPHE, Biswanath
11	Md. Ruhul Amin	Sub-Assistant Engineer, DPHE, Companiganj

12	Kazi Riyel	Assistant Engineer, DPHE, Dakshin Surma
13	Abdulla	Sub-Assistant Engineer, DPHE, Fenchuganj
14	Tushar Paul	Sub-Assistant Engineer, DPHE, Jointiapur
15	Saiyod Didarul Islam Kayes	Sub-Assistant Engineer, DPHE, Osmaninagar
16	Md. Rafiqul Islam	Assistant Engineer, DPHE, Sylhet Circle
17	Ahamed Hossain Chowdhury	Area Manager, AAN
18	Md. Mustafijur Rahman	Union Supervisor, AAN
19	Sayed Abdullah Hiss Sunny	Project Manager, AAN
		Batch-2
Sl No.	Name	Designation
1	Md. Abul Kashem	Executive Engineer, DPHE, Sunamganj
2	Abdullah al Mamun	Assistant Engineer, DPHE, Sunamganj Sadar
3	Mridul Kanti Sarkar	Sub-Assistant Engineer, DPHE, Biswamvarpur
4	Mizanur Rahman	Sub-Assistant Engineer, DPHE,
5	Chatak Md. Atiwour Rahman	Sub-Assistant Engineer, DPHE, Sunamganj Sadar
6	Ujjal Khan	Sub-Assistant Engineer, DPHE,
7	Derai Mehedi Hasan	Sub-Assistant Engineer, DPHE, Dharmapasha
8	Md. Eliass Shah Sarwar	Sub-Assistant Engineer, DPHE, Doarabazar
9	Md. Abdur Rob Sarkar	Assistant Engineer, DPHE, Jagannathpur
10	Ram Kumar Saha	Sub-Assistant Engineer, DPHE,
11	Jamalganj Md. Rasedul Islam	Assistant Engineer, DPHE,
12	Sulla Alamin Sub-	Assistant Engineer, DPHE, Tahirpur
13	Md. Khaleduzzaman	Executive Engineer, DPHE, Moulvibazar
14	Swapan Chakma	Assistant Engineer, DPHE, Moulvibazar Sadar
15	Md. Jahangir Alam	Estimator, DPHE, Moulvibazar
16	Md. Muhosin	Sub-Assistant Engineer, DPHE, Kulaura
17	Moin Uddin	Sub-Assistant Engineer, DPHE, Barlekha
18	Md. Shofiqul Islam	Sub-Assistant Engineer, DPHE, Juri
19	Sujan Sarkar	Sub-Assistant Engineer, DPHE, Kamalganj
20	Md. Saiful Islam	Sub-Assistant Engineer, DPHE, Sreemangal
21	Ahamed Hossain Chowdhury	Area Manager, AAN
22	Abdul Alim	Project Engineer, AAN

Table-2: List of participants in ToT by ITN-BUET

The collaborative efforts of AAN, UNICEF, and ITN have played a crucial role in achieving the project's objectives and promoting sustainable water solutions in the targeted areas.

Below is the Union wise summary of equity based proposed sites

Sl. No.	Name of Union	**Proposed WP**	Beneficiaries				
			HHs	Male	Female	Child	Total
1	Purbo Laksmiprasad	109	1,241	2,812	2,941	1,683	5,733
2	Passim Laksmiprasad	125	2,297	5,418	5,635	4,044	11,053
3	Purbo Dighirpar	90	1,117	2,380	2,431	1,522	4,811
4	Satbak(passim Dighirpar)	73	939	2,593	1,786	1,668	4,379
5	Bara Chatul	101	1,464	3,654	4,234	2,243	7,888
6	Kanaighat	74	1,100	2,297	2,771	2,402	4,768
	Total	572	8,158	19,154	19,498	13,562	38,652

Table-4: Number of proposed water point site in Kanaighat, Sylhet

3.8 Support to DPHE for community mobilization and WASH

AAN has effectively fulfilled its commitment to supporting the Department of Public Health Engineering (DPHE) and Local Government Institutions (LGIs) across various areas, such as site selection, installation supervision, feasibility assessment etc. Comprehensive support was provided to orient officials on arsenic, safe water, sanitation, and hygiene, extending beyond mere installation to prioritize the sustainable operation and maintenance of facilities in targeted upazilas. A total of 133 officials from diverse organizations and LGIs underwent training on Water, Sanitation, and Hygiene (WASH) as part of this initiative supported by UNICEF.

Pic-7: Community Mobilization

AAN, in collaboration with UNICEF, adopted a holistic approach involving community mobilization and consultation, actively engaging local residents in the installation process. Mechanisms for tariff collection were established to fund routine operation and maintenance, ensuring financial sustainability and active community participation. Thorough training for caretakers responsible for day-to-day operations and maintenance not only equipped them with essential skills but also instilled a sense of ownership within the community, fostering a sustainable model.

Aligned with the ongoing Government safe water supply projects, AAN focused on facilitating caretaker training for water points under those projects. The integration of climate-resilient Water Safety Plans (WSP) underscored the importance of maintaining water safety amidst environmental challenges, enhancing long-term resilience against climate change impacts.

This task's completion represents a significant achievement in promoting sustainable water solutions, community engagement, and climate resilience. AAN's collaborative efforts with DPHE and LGIs not only facilitated successful installations but also laid the foundation for enduring community-led management and maintenance, ensuring the ongoing provision of safe water in targeted upazilas.

3.8.1 Water points installation

The Department of Public Health Engineering (DPHE) plays a crucial role as the mandated stakeholder in allocating and installing water points. Meanwhile, Asia Arsenic Network (AAN) with the overall guidance from UNICEF takes on the responsibility of recommending potential water point sites for the targeted community. This is achieved through various community engagement programs and the application of project-developed site selection criteria. The scope also encompasses water points installed by the ARRP, BSWSC, and Haor projects since 2021.

Pic-8: Rehabilitating water points

In the timeframe of 2021-2024, the Local DPHE provided information on 554 installed water points under projects like ARRP. From this list, AAN strategically selected 572 water points for project implementation. These include Deep Tubewells (DTWs) with No.6 pump 274, DTWs with DTWs with submersible pumps (TSP) 280. Additionally, 40 Water Points (WP) were installed in flood-prone areas of Kanaighat Upazila. To address the challenges posed by flooding, a double-platform deep tubewell was introduced. This innovative solution features one platform at ground level and another elevated above flood levels, ensuring consistent access to safe water during floods. Villagers actively participate by moving the tubewell head to the elevated platform during floods, protecting the water point from submersion. A dedicated caretaker, equipped with

maintenance tools and trained for regular operation for the above mention WP, was appointed. Furthermore, the community received education on hygiene practices and the installation of handwashing devices, contributing to improved sanitation and hygiene practices. This comprehensive approach reflects a commitment to ensuring sustainable and resilient water access in the targeted areas.

The water quality test was conducted both at the DPHE laboratory in Sylhet and in the field by a team recommended by UNICEF. Unfortunately, the results from both tests revealed that 2 Deep Tubewells exceeded the Bangladesh standard of 50 parts per billion (ppb) for arsenic content. In response to these findings, users have been advised not to utilize the water from these tubewells for drinking and cooking purposes. DPHE taking necessary steps to installed Arsenic Removal Unit to supply safe water for those deep tubewells. List of Double platform water points included in Annex-2

3.8.2 Rehabilitate Water Points

AAN identified 98 inactive water points that were arsenic-safe and could be repaired. During the project, 66 of these water points were successfully repaired, benefiting approximately 5,536 people. These repaired water points were handed over to the community.

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In many cases, issues such as damaged or stolen check valves, buckets, tubewell heads, platforms, drains, or water seals were identified. Constructing a new platform cost around Tk. 8,000, while additional repairs ranged from Tk. 500 to Tk. 1,500, including mechanic fees. However, spare parts for the Tara pump were not locally available. The cost-effective nature of these repairs suggests that similar initiatives can be implemented in other areas, potentially addressing water crises in more communities. This achievement underscores the value of innovative solutions and community-driven efforts in tackling critical challenges and improving lives. The list of rehabilitated water points is included in Annex-3.

Pic-09: After rehabilitation

3.8.3 Caretakers training on O&M and WSP

Caretaker training was successfully completed for 603 water points, with the participation of 1,156 individuals. The initial goal was to train two persons from each water point, but some points had only one participant. While the total target was set at 1,206 persons, the achieved number was 1,156 indicating that 50 persons did not participate. List of trained caretaker attached as Annex-4.

Pic-10: Caretaker training

Maintenance tools were distributed to the Community-Based Organizations (CBOs) whom has public water points. However, in cases where a CBO had more than 10 water points, managing them with a single set of tools proved challenging. To address this, the project team is considering providing extra tool kits for CBOs with more than safe water points. In the CBOs were more than 10 families have water option, only those CBOs have been given more than 1 tool. Those CBO caretakers who could not attend the training due to various reasons are distributed tools through on-spot training. For DTWs installed by the GoB-UNICEF project with double platform setups, all 40 received tool, along with an additional pipe wrench (18"). List of operation and maintenance tools distribution attached as annex-5.

Union Wise Summary of Tools Distributions

SL	Union	Total Community	Total Tools
1	Kanaighat	40	45
2	Passim Dighirpar (Satbak)	17	28
3	Passim Laksmiprasad	6	7
4	Purbo Laksmiprasad	9	11
5	Purbo Dighirpar	39	47
6	Borochotul	41	50
Total	6 Union	152	188

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3.8.4 User Group Orientation on CR-WSP

Orientation programs on Water Safety Plans (WSP) were organized for water user groups in close proximity to various water options. The goal was to ensure that at least one person from each family participated, with a focus on involving female members. A total of 14,062 individuals from 866 water points actively participated in these orientation sessions.

During the orientation, participants were educated on essential practices, such as proper techniques for collecting water from the water options, methods for carrying and preserving water, and the significance of maintaining cleanliness in the surroundings of water options. The instructional content was presented using a flip chart to enhance understanding and engagement.

Moreover, the orientation covered the anticipation of potential challenges that the participants might encounter in the future. Through interactive discussions, participants were given an opportunity to explore and exchange ideas on how to effectively address and resolve these potential problems. This proactive approach aimed to empower the community members with the knowledge and skills necessary to ensure the ongoing safety and sustainability of their water sources.

The comprehensive orientation not only provided practical insights into daily water-related activities but also fostered a sense of community collaboration and shared responsibility. By incorporating discussions on problem-solving and encouraging active participation, the orientation programs contributed to building a resilient and well-informed community dedicated to maintaining the integrity and safety of their water sources.z

3.9 Capacity building on WASH:

3.9.1 Training on WASH, WSP and Arsenic:

Training sessions for Water and Sanitation (WatSan) committee members were conducted in all 6 targeted unions and 1 upazila. A total of 881 including entrepreneurs training participants actively participated in these training sessions. Additionally, training sessions were held for Community-Based Organization (CBO) leaders. As of the reporting period, 259 CBOs had already been formed, and during this timeframe, 518 community leaders received training from 259 CBOs. The goal was to have two representatives from each CBO trained.

Furthermore, various workshops and training programs were organized, including upazila and union inception workshops, as well as planning workshops. Staff foundation training sessions were also conducted as part of the comprehensive training initiatives. These efforts aimed to enhance the knowledge and skills of participants to strengthen the capacity and effectiveness of community-based initiatives in the targeted areas.

AAN conducts monthly CBO meetings with community leaders in 259 CBOs across the targeted 6 unions in 1 Upazila. Throughout the project duration, a total of 3,024 CBO meetings were convened, with the active participation of 17784 members. These meetings served as a platform for dialogue and collaborative decision-making.

Pic-11: CBO meetings

During these gatherings, participants maintained a resolution register and deliberated on various crucial issues. The agenda typically included a review of the minutes from the previous meeting, progress reports, and plans for new latrine installations, latrine renovations, handwashing device installations, tube well renovations, and ODF (Open Defecation Free) declaration.

The CBO committee members actively took responsibility for installing new latrines, repairing unhygienic ones, and working towards improving the Water, Sanitation, and Hygiene (WASH) situation in their communities. These efforts foster community-driven initiatives and enhance overall WASH conditions through collaboration and shared responsibilities.

3.9.3 WSP corner

The project team strategically established 7 WSP corners across the Union Parishads, with 6 units distributed within the union and one situated in the DPHE offices Kanaighat upazila. The purpose behind this initiative was to empower villagers to independently test their drinking water points for arsenic contamination.

Pic-12: WSP corner

Recognizing the dynamic nature of arsenic concentration, it is recommended to conduct tests twice a year, acknowledging that water deemed safe today may become contaminated over time.

Also applicable for newly installed Water Points (WPs). Each WSP corner is well-equipped with essential resources, including a volunteer, desk, chair, cabinet, a register book for recording arsenic test results, and an arsenic test kit. Interested villagers are encouraged to utilize the WSP corner for testing their water points, with a reasonable cost associated with the service. The arsenic test, conducted using the test kit, provides crucial information about the safety of the water. The Union Parishad facilitates this process by charging a fee ranging 150 per test.

In the upazila of Kanaighat, a total of 148 tubewells were rigorously tested by the 7 WSP corners, and encouragingly, all of them were found to be arsenic-safe except one. This positive outcome highlights the effectiveness of the testing initiative in ensuring the provision of safe drinking water to the local communities.

Additionally, to enhance transparency and facilitate efficient monitoring, 7 monitoring charts were prepared and handed over to the Union Parishads and the DPHE offices at the upazila level. These charts comprehensively outline the project's activities, set targets, and current progress at the union level. To maintain an updated and accurate record of progress, the monitoring charts were regularly reviewed and refreshed on a quarterly basis, ensuring that stakeholders remained informed about the ongoing developments in the arsenic testing and water safety initiatives.

3.9.4 Courtyard session

AAN's WASH Motivators undertook house-to-house visits in areas where sanitation, hygiene, and arsenic-safe coverage were observed to be inadequate. Residents were invited to participate in courtyard sessions aimed at discussing the present conditions of sanitation, hygiene, and arsenic safety in the community. These sessions served to enlighten participants about the advantages and disadvantages of the WASH situation and emphasized their responsibilities in improving the situation.

WASH Motivators facilitated five distinct sessions covering critical aspects:

1. **Arsenic and Its Impact Session:** In this session, the devastating effects of arsenic were discussed. Participants learned about the risk and its impacts by using arsenic-contaminated water for drinking and cooking. Flip charts and posters were utilized to illustrate the consequences of arsenic exposure. Throughout the project period, this session was conducted at 2,056 sites, engaging 34,016 participants.

Pic-13: Courtyard session-1

2. **Hand Hygiene Session:** After home visits, participants were encouraged to join handwashing sessions to practice proper handwashing with soap. The session highlighted the occasions when handwashing is crucial through visual aids such as hygiene pouts, posters, and a 5-F diagram. This session took place at 1,005 sites, with 16,430 participants during the project period.

Pic-14: Courtyard session-2

3. **Sanitation Session:** AAN Wash Motivators, along with community leaders, visited community latrines and invited residents to attend sanitation sessions. Discussions focused on the drawbacks of unhygienic latrines, incorporating the 5-F diagram and utilizing sanitation pouts, posters, and a latrine game. These sessions were conducted at 1,172 sites, engaging 19,224 participants during the project period.

4. **Arsenic Safe and WSP Session:** Emphasizing the importance of arsenic-safe water for maintaining health, this session introduced the concept of a Water Safety Plan (WSP) to safeguard water from source

to consumption. Posters and flip charts were used to illustrate arsenic and WSP-related information. This session occurred at 866 sites, involving 14,062 participants during the project period.

5. **Personal and Menstrual Hygiene Management Session:** Female WASH Motivators invited women and adolescent girls from the community to participate in sessions focusing on personal and menstrual hygiene management. The Motivators followed the menstrual hygiene guidebook, utilized pocketbooks with pictures, and shared stories from a storybook. Throughout the project period, this session took place at 413 sites, engaging 6,104 women and adolescent girls.

These initiatives reflect AAN's commitment to community education and empowerment in promoting better WASH practices and enhancing overall community health and well-being.

Courtyard session: Conducted (October 2022 to December 2024) in Kanaighat as below:

Session	Kanaighat	
	Number	Participants
Arsenic and its Impact Session	2,056	34,016
Hygiene session	1,005	16,430
Sanitation session	1,172	19,224
Safe water and WSP session	866	14,062
Personal and menstrual hygiene management	413	6,104
Total	**5,512**	**89,836**

Table-5: Courtyard session conducted in Kanaighat, Sylhet

3.9.5 Switching to arsenic safe water points

Haor, Hill is surrounded by the river Kanaighat. In these regions, some individuals and households use unimproved water sources such as ponds, rivers, and hoars for drinking and cooking due to the absence of safe water options. Some of those areas are not suitable for installing DTWs as gravel layer existence. Recognizing this challenge, the project staff conducted visits to these areas, aiming to motivate the residents to shift towards using improved and safe water sources for their drinking and cooking needs. The motivation involved discussions on the drawbacks and disadvantages associated with using unsafe water.

During the project period, a noteworthy outcome was achieved, with a total of 6,955 families switched to arsenic-safe wells as a result of the motivation efforts. This positive change signifies a significant step toward improving access to safe water and fostering better health practices in the community.

3.9.6 Toilet installation and repair

The Community Situation Analysis (CSA) revealed that a significant number of households in the targeted 6 union across 1 Upazila either lacked latrines or had unimproved latrines. In response to this finding, the project staff conducted house-to-house visits to motivate residents to install and renovate their latrines.

WASH motivators played a crucial role in encouraging community members to install new latrines, particularly in the higher part of their households. We achieved a substantial outcome with 2,213 families opting to install new latrines, 15,123 families upgraded their latrine from unimproved to improve latrine. . This concerted effort signifies progress toward enhancing sanitation facilities and promoting healthier practices within the community.

3.9.7 Hand washing device installation and practice

The Community Situation Analysis (CSA) highlighted a prevalent lack of handwashing facilities or devices in a majority of households within the targeted 6 union across 1 Upazilas. In response to this observation, the project staff undertook house-to-house visits and organized hand hygiene sessions to motivate residents to install handwashing devices.

WASH motivators played a proactive role in assisting community members, at times helping them install locally made handwashing devices equipped with taps and buckets. During the project, a positive outcome was achieved, with 17,300 units handwashing units installed and adopting proper handwashing practices. This initiative reflects progress toward improving hygiene practices and fostering a healthier living environment within the community.

3.10 Coordination:

Throughout the reporting period, the project demonstrated significant progress by effectively coordinating with key stakeholders at both local and central levels. Collaborative efforts were maintained with the Department of Public Health Engineering (DPHE), Local Government Institutions (LGIs), and the United Nations International Children's Emergency Fund (UNICEF). Activities such as the Upazila inception workshop, Union planning meetings, and WatSan committee orientations witnessed active participation from local members, occasionally including Union Parishad Chairmen. Quarterly progress-sharing meetings with Union Parishad and monthly NGO coordination sessions at the Upazila level ensured a harmonized approach. The Area

Pic-15: Coordination

The manager consistently communicated with DPHE's Sub-Assistant Engineer (SAE) and Assistant Engineer (AE), sharing monthly progress reports for transparency and real-time updates. Collaboration with UNICEF involved periodic field visits, report sharing, and occasional visits to the local office. Central coordination was achieved through project coordination meetings, fostering unity among Implementing Partners, DPHE, and UNICEF. Major stakeholders, including WatSan Committee Members, Union Parishad, and Implementing Partners (IPs), actively contributed to the project's success. Major stakeholders for the project are listed in below:

Stakeholder	Role in implementation
Upazila Parishad	Upazila parishod support administrative part and also play role through Upazila WatSan committee for equity-based water point site allocation, verification and certification on Arsenic Safe Union declaration.
DPHE	DPHE manor role is to supply necessary safe water point, technology selection, site selection, and water point's installation etc. Also participate in Arsenic Safe Village/Union declaration.
LGIs	To arrange working environment in field and support CBOs for declaration. Also participate in Arsenic Safe Village/Union declaration and Verification.

National NGOs (AAN)	Engaged in enhancing the capacity of communities through community action planning, equity-based site selection, awareness of arsenic/ sustainable O&M, water safety planning, improved sanitation and hygiene.

3.10.1 Meetings and monitoring Visits

District-Level Progress Sharing Meeting:

On March 12, 2023, a district coordination meeting convened at the DPHE office in Sylhet. Mr. Alomgir Hossain, Executive Engineer of Sylhet, presided over the meeting. Representatives from AAN, Forman Ali presented current project activities and outlined the plan for the upcoming quarter. The meeting also involved discussions on preparing a list of double-platform tube wells for flood-affected areas in Kanaighat, and a request was made to share screening data in soft copy for Kanaighat Upazila. The Executive Engineer noted that screening data for the ARRP project couldn't be shared without the Project Director's consent and mentioned ongoing efforts to find a double-platform solution, requesting AAN to provide a list.

District-Level Progress Sharing Meeting (Zoom):

On June 22, 2023, a district coordination meeting was conducted through Zoom. Participants included Mr. Kamrul Alam, UNICEF WASH Officer, Mr. Sayed Sunny, Project Manager, Ahamed Hossain Chowdhury Helal, Area Manager Balaganj, Forman Ali, Area Manager Kanaighat, and various project officers. Mr. Ahamed Hossain Chowdhury Helal presented the progress report on behalf of AAN for the period from April 2023 to June 2023, and Mr. Forman Ali shared the progress of double-platform tube well installations. Mr. Kamrul Alam suggested improvements to the report contents and recommended more frequent meetings of this nature.

Monitoring Visits by UNICEF and Other Stakeholders:

1. On February 26, 2024, UNICEF, represented by (1) Mr. Vijay matta, GW Expert (2) Peter Meas, Chief of WASH (3) Dr. Kazi Matin Uddin Ahmed (4) Saifur Rahman, Pd GOB-UNICEF.(5) Nargis Akter WASH Officer UNICEF (6) Kamrul Alam, WASH Officer Sylhet Division and (7) Zahid Ahmed Consultant UNICEF., conducted visit at Kumayer mati communities and Union WSP corner of Dighirpar Purbo union. The visit included observations of field activities such as modified suction mode to force mode in Raised platform tube wells, courtyard sessions, newly installed and renovated latrines, and handwashing devices. Discussions were held with villagers, and local government institutions (LGI).
2. On September 12, 2023, another monitoring visit took place in Kanaighat, led by Mr. Kamrul Alam and Md. Ahsanul Ahad, Afrin Tarin from IDE. The team visited the Joitipur community of Kanaighat union, observing activities such as DTW-raised platform construction, newly installed and renovated latrines, and handwashing devices. Discussions with the O & M caretaker focused on operation and maintenance. The team then visited Lokhay CBO Bagbari of Barachatul union, where they observed DTW raised platform construction and courtyard sessions.
3. UNICEF Dhaka Office, Dr. Shamim Uddin – Consultant, UNICEF, and Gregory Palintest Ltd., conducted a monitoring water quality test on September 25, 2023, at various locations, including Purbo Dighirpar union (DTW-2), Paschim Laximprasad DTW-1, Satbak union (DTW-3), Kanaighat union (DTW-4), and Bara Chatul union-4. A total of 14 water samples were collected and tested using the Palintest kit at Kanaighat Upazila.
4. On June 28, 2024 UNICEF, WASH Manager Mr,Raphael Nwozor and Mrs Tahmina Haque Programme Officer child protection visit at Satpari Passim Community Satbak union and Kumayer mati Community Dighirpar Purbo union at Kanaighat upozila. Discussed with community people.
5. On December 8, 2024, UNICEF Sylhet Divisional WASH Manager Kazi Dil Afroz and WASH Officer Earshadul Hague of the Asia Arsenic Network visited Nij Choura in Kanaighat Sodar

Union and Kumayermati CBO in Dighirpar Purbo Union. During the visit, they discussed positive developments in WASH with CBO leaders. Kazi Dil Afroz inspected deep tube wells with raised platforms, latrines, and hygiene facilities. These tube wells provide safe water during floods in low-lying areas. He expressed satisfaction with the sanitation system, though concerns were raised about the water source due to underground stones, as presented by AAN Area Manager Shailandra Debnath. The team appreciated AAN's ground-level activities.

3.11 Demonstrate arsenic safe unions:

With the overall guidance from UNICEF team, AAN has successfully implemented a comprehensive training program for frontline staff, with a specific focus on interventions related to water, sanitation and hygiene promotion. The primary goals included guiding communities towards achieving Open Defecation Free (ODF) status, instilling lasting behavioral changes related to use of safe water and water safety plans, ensuring safe excreta disposal, particularly for children, promoting hand washing with soap before meals and after defecation, and enhancing awareness about menstrual hygiene. Additionally, AAN played a key role in community mobilization through community-led approaches, supported the celebration of ODF and arsenic-safe communities, and advocated for the installation of low-cost hand washing devices at the household level.

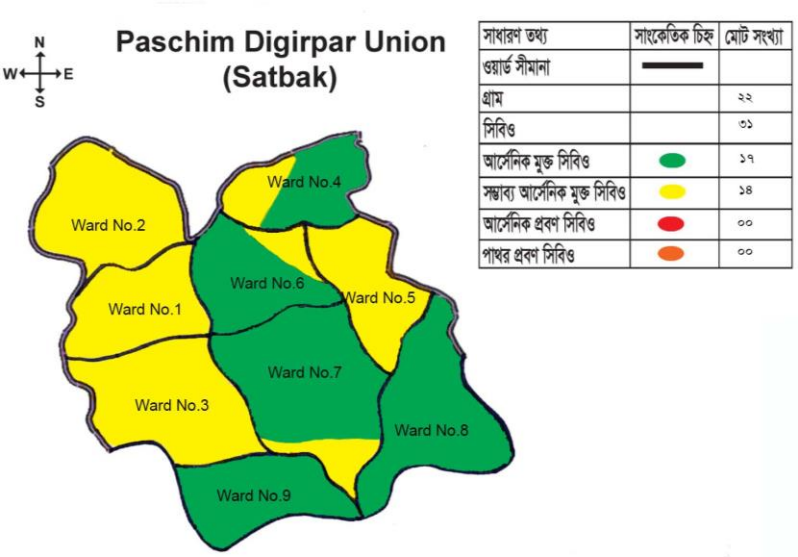
In the process of attaining arsenic-safe union status, a meticulous series of steps were undertaken according to preset ASU declaration guideline, commencing at the Community-Based Organization (CBO) level and progressing through the Village, Ward, and Union levels. The process began with the CBO declaring its commitment to eliminating open defecation, ensuring the installation of hand washing devices with soap, and collecting safe water for drinking and cooking purposes. This declaration underwent thorough verification by the CBO committee.

Asia Arsenic Network working area Kanaighat Upozila is an exceptional area. A general review shows that deep tube wells cannot be installed here due to the presence of underground rocks in the Surma and Luva river bank areas and the hilly areas adjacent to the border. Even if shallow tube wells are installed, water is not available throughout the year. Again the excess of arsenic is almost constant in the stone-prone areas. A significant area will be free of arsenic if the required water source is available. In the six attached maps, the yellow part is the water treatment plant approved by UNDP, and if deep tube wells are installed, this part will be free tom arsenic. On the map, the gray part is the stone–bearing area in the arsenic-prone area.

From November 2022 to December 2024, various awareness programs and activities among beneficiaries revealed no open defecation in the project area. Sanitation has improved as expected, with households following safe water practices. Every household has soap and water for handwashing, and children now use latrines wearing sandals. Beneficiaries installed 2,180 new latrines, 14,856 latrines converted from unimproved to improved, and 17,300 handwashing devices installed near latrines through motivation from the project team.

Under the GOB-UNICEF project, 40 deep tube wells with double/raised platforms were installed, providing arsenic-safe water even during floods. Community discussions during UNICEF visits confirmed many people accessed this safe water by boat. The project repaired 62 safe water sources and various projects also installed 359 tube wells which ensured arsenic-safe water in the area. Also, establish an arsenic testing corner (WSP corner) in six unions and DPHE office which will help villagers to test their tube wells water for Arsenic.

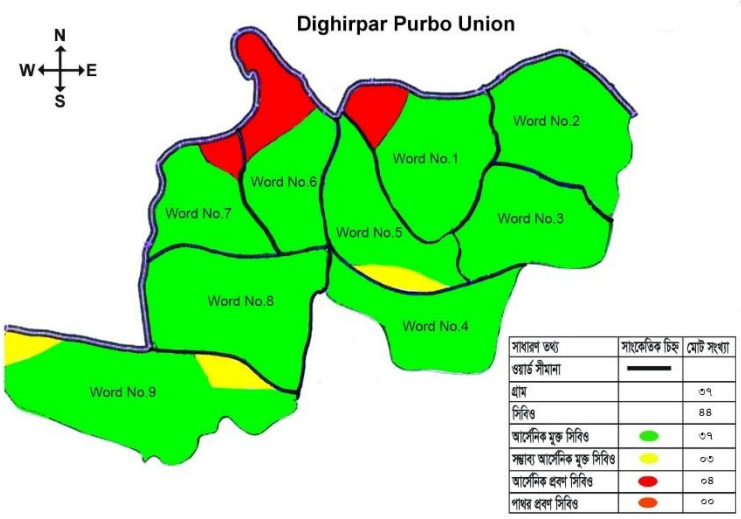
Satbak Union: Satbak Union has 31 CBOs, 2,869 households, and a population of 17,647 (8,510 males and 9,137 females). There are 51 sources of safe water, with 17 CBOs identified as arsenic-safe, highlighted in green on the map.



In 14 CBO areas, deep tube wells cannot be installed due to underground rock. A proposal for PWSS has been approved to provide arsenic-free water to these 14 CBOs, benefiting 1,436 households and 8,078 people. The PWSS-covered area, Additionally, UNDP has approved the installation of deep tube wells in the union to further expand access to safe water. Which is marked in yellow on the map.

Dighirpar Purbo union: This union has 44 CBOs with 4,128 households and a population of 23,628. There are 116 arsenic- safe water sources, with 37 CBOs in green-marked areas identified as arsenic-safe.

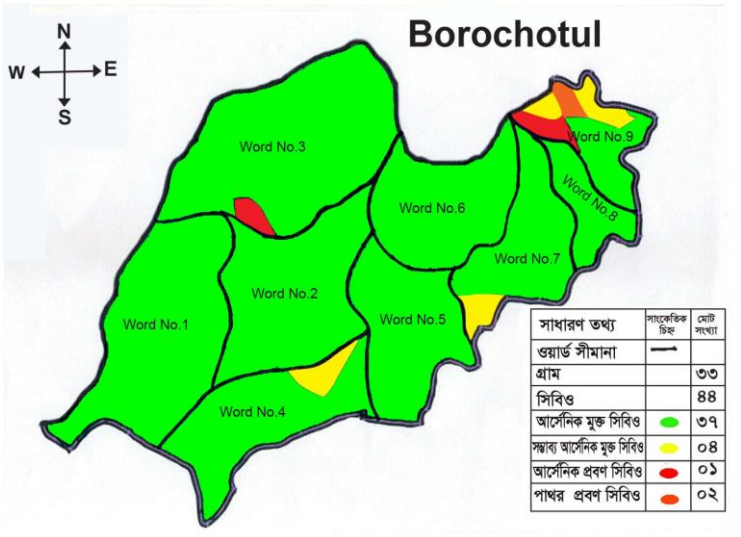
In three yellow-marked CBOs, UNDP and DPHE have approved the installation of deep tube wells. However, in four red-marked CBOs near the Surma River, deep tube wells cannot be installed due to arsenic contamination and underground rocks, making the area unsafe. These red zone areas have 379 households and a population of 2,146.



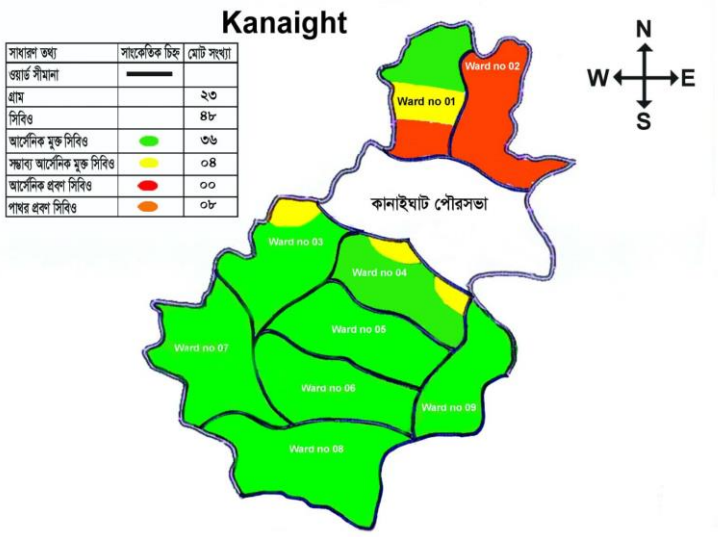
Borochotul Union: Borochotul Union has 44 CBOs, 3,901 households, and a population of 21,393. There are 181 arsenic-safe water sources, with 37 CBOs located in green-marked areas on the map.

In four yellow-marked CBOs, no deep tube wells are currently installed, but UNDP has approved their installation based on the union parishad's proposal.

In the red-marked areas, three CBOs have intolerable levels of arsenic. These red zone areas include 159 households with a total population of 757.



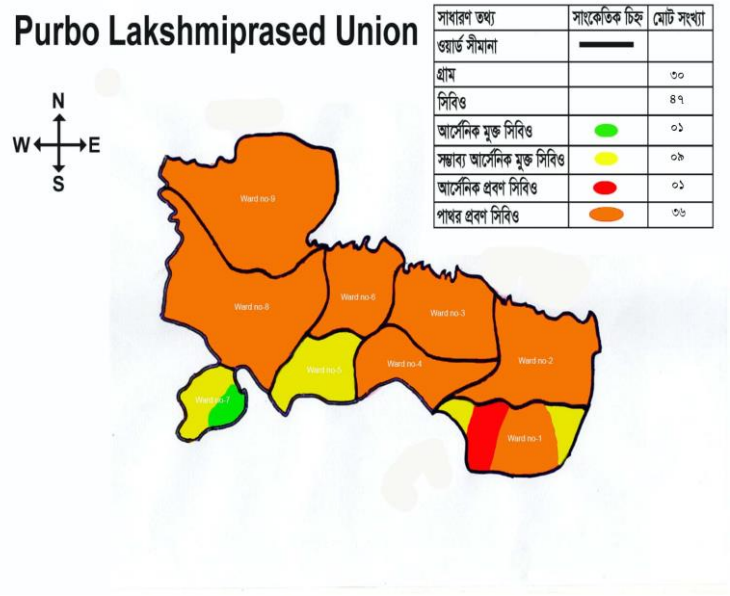
Kanaighat Union: Kanaighat Union has 48 CBOs, 1,913 households, and a total population of 28,073. There are 327 arsenic-free safe water sources, with 36 CBOs in green-marked areas using this water for cooking and drinking.



In four yellow-marked CBOs, safe water sources are limited, and UNDP has approved the installation of deep tube wells as proposed by the union parishad.

Eight CBOs in brown-marked areas cannot have deep tube wells due to underground rock. These brown zone areas include 888 households and a total population of 5,098.

Purbo Laksmiprased union: The union has 47 CBOs, 5,052 households, and a total population of 25,303. There are 183 arsenic-safe water sources.

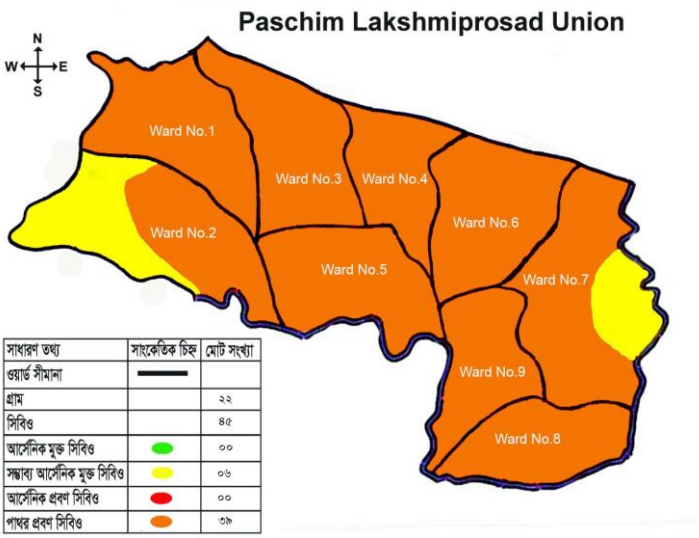


In 37 CBOs marked brown on the map, deep tubewells cannot be installed due to underground rock. While some shallow tube wells exist, they do not provide water year-round. Random water tests have shown high levels of arsenic in these areas. The brown zone includes 3,927 households and a population of 19,766.

Only one CBO in the green-marked area on the map has been identified as arsenic-safe. Based on the union parishad's proposal, UNDP has approved the installation of two deep tube wells and two PWSSs. These will provide arsenic-safe water to the area in the near future, with the place selection verified by the concerned department.

Paschim Laksmiprased Union: The union has 45 CBOs, 4,242 households, and a total population of 24,085. There are only 10 arsenic-safe water sources.

In 39 CBOs marked brown on the map, deep bore wells cannot be installed due to subterranean rock. While some shallow tube wells exist, they do not provide water year-round. People rely on rivers, streams, ponds, wells, and springs for cooking and drinking, but random water tests have shown unacceptable levels of arsenic in some areas. These 39 CBOs include 3,616 households and a population of 20,447.



In the yellow-marked area, UNDP has approved the installation of two deep tube wells and one PWSS for six CBOs. Additionally, ESOLVE International Limited has received approval to install one PWSS in another CBO. These developments will significantly increase access to arsenic-free safe water in the union. Place selection has been verified by the concerned department.

Due to geographical challenges, such as the presence of underground rock and arsenic contamination, it is not feasible to install deep tube wells in certain parts of the working area. These limitations have left many communities reliant on unsafe water sources, including shallow tube wells, rivers, ponds, and springs, which often fail to provide a consistent and safe water supply.

To address this issue, modern and accessible technologies, such as piped water supply systems (PWSS) , surface water treatment units, Rain Water harvester, Modified dugwell with treatment unit etc , are being introduced to provide arsenic-free safe water to the affected populations. These solutions are tailored to the unique conditions of the area, ensuring that even in regions where deep tube wells cannot be installed, people can still access safe and sustainable water sources.

The use of these advanced technologies, combined with the efforts of stakeholders like UNDP, DPHE, and local authorities, ensures that safe water can reach vulnerable communities, improving public health and overall quality of life in the region.

3.11.1 Arsenic safe community and village with ODF

Throughout the reporting period, a total of 127 Community-Based Organizations (CBOs) which cover 63 villages took the initiative to declare themselves as arsenic safe and open defecation-free (ODF). This marked a significant accomplishment in the concerted efforts to improve water quality and sanitation practices within the targeted communities.

154 Deep tube wells by UNDP in 6 Unions of Asia Arsenic Network of Kanaighat Upozila ,and 3 water treatment plants in 2 unions out of 6 unions. A total of 41 CBO arsenic safe open latrines in 6 unions will be free if the UNDP project is implemented. In this, a total of 40 CBOs of 22 villages of 6 Unions will bring 21,761 people of 3,925 families under safe water coverage.

To ensure the credibility of these declarations, the Union WatSan committee undertook a verification process. This involved conducting random visits to the declared villages by selected representatives from the relevant Union. Through these visits, the committee gathered observations, assessed the accuracy of the claims, and either confirmed or provided feedback on the arsenic-safe and ODF status of the villages.

A detailed list of the CBOs and villages, along with their current statuses, can be found in Annex-6 under "List of Arsenic-Safe Communities and Villages with ODF." This provides transparency and accountability in the project's results. This approach highlights the hard work of the community members and CBOs and shows the ongoing commitment to maintaining arsenic-safe and Open Defecation-Free (ODF) conditions in the targeted areas.

3.11.2 Day observation and participating in special events

Pic-22: Day observation and participation-1s

On October 15, 2023, the vibrant celebrations of "National Sanitation Month October 2023 and Global Handwashing Day" unfolded in Kanaighat. Sylhet. The participants, including students from local schools, government officials, and esteemed community members, gathered to champion the critical practice of handwashing for the preservation of public health. In Kanaighat, thirty girls and twenty boys from Raygor High School and Kanaighat Model Primary School actively engaged. The focal point of the event was a handwashing demonstration where students showcased the proper technique, adhering to World Health Organization guidelines, using soap and water. This effort aimed to educate others and was observed by government figures, ensuring a broader dissemination of essential knowledge. Lively rallies, featuring various community representatives, teachers, health workers, and journalists, paraded through residential areas, displaying banners and posters emphasizing the significance of regular handwashing. Educational sessions led by prominent speakers in both Upazilas further underscored the importance of hand hygiene, making the events in Kanaighat promoting public health awareness.

On the occasion of 24th World Hand washing day on 15th October, the day was celebrated in a total of 7 places including 6 primary schools of 6 unions in Kanaighat Upozila parishad premises and work area. Kanaighat Upozila Assistant Commissioner (Land) Mr Wazed Washik inaugurated the event. Officials of all departments of the Upozila participated in it. Rally sand discussion meeting and hand washing exhibitions are held in different ways in all the celebrations. The special importance of hand washing is discussed in detail in the ceremony. A total of 601 people were present.

Pic-23: Day observation and participation-2

The impactful events in Kanaighat Upazila showcased the potential for positive change when communities unite for a common cause. By emphasizing the importance of continued efforts to promote hand hygiene, the participants, including students, officials, and community members, played a vital role in creating cleaner and safer environments. The celebration not only educated students on this essential practice but also empowered them to become advocates, actively spreading knowledge within their communities. As health ambassadors, these students significantly contributed to

the collective effort toward building a healthier community, reflecting the positive outcomes achievable through collaborative initiatives focused on public health awareness.

World Water Day observation: "Accelerating Change; The Action You Take, No Matter How Little, Will Help Solve the Water Crisis" was the subject of the 2023 World Water Day. On March 22, 2023, project teams celebrate World Water Day in 6 unions and 1 Upazila, Kanaighat, with rally, Miking, and meetings. Also, a clean water campaign with the slogan "Let's do our best to solve water problems" was run from March 18 to March 20. Using the five steps of safe water planning—water source, collection, transportation, storage, and consumption—this campaign aware the public on the value of safe water. Water may not be safe if even one of these five stages is violated. Everyone involved in the campaign pledged to safeguard the water.

Pic-24: Day observation and participation-3

Development fair: In September 2023, as part of a national program, Balaganj Upazila Parishad organized a development fair. Asia Arsenic Network and local DPHE jointly participated, showcasing, equity and abidance-based water point sites allocation system, several types of low-cost handwashing devices, and latrines (twin and single pit), which garnered positive attention from government officials, including the Member of Parliament (MP). He praised the project's use of locally available recycled materials to develop unique types of handwashing devices and expressed a commitment to allocating safe water points according to community needs.

During the fair, the Honorable Member of Parliament announced a shift from individual-level water point allocations to allocations for groups of families, demonstrating a commitment to equitable access. Subsequently, the Asia Arsenic Network and DPHE representatives were invited to meet with him in Sylhet to discuss this matter further.

Pic-25: Day observation and participation-4

Accordingly, the project team and DPHE representative had a meeting with him at his office. MP shows his interest in using equity and evidence-based water point site selection by involving the local community. He also shows his interest in allocating his portion of safe water points according to the project-developed necessary water points site list for the four unions. He also requested support in preparing a similar type of list for the remaining two Unions of the Balaganj Upazila. He shows his interest to contribute in making arsenic-safe Upazila rather than the project targeting four unions. He again thanked the project team for preparing this type of list which he looking for a long time.

3.11.2 Case study and Human story

During the reporting period, project staff identified several extraordinary approaches and initiatives undertaken by community members that have had a positive impact on the community. Some of these noteworthy initiatives were selected for further replication and documented as case studies or human stories. These stories encompass a range of initiatives, including equity-based site selection, the establishment of climate-resilient water points (Double platform Deep Tube Wells), union-level water quality testing, and menstrual hygiene promotion.

These case studies not only highlight the innovative and positive actions taken by the community but also serve as valuable examples for learning and replication in similar contexts. Below a sample case study given:

Public importance of deep tube wells with Raised platform installed by GOB-UNICEF

Kanaighat Upazila of Sylhet District includes Dighirpar Purbo Union, where Kumairmati village is located. Kumairmati is a CBO area where most residents were previously unaware of water sanitation and hygiene practices. The majority of the villagers used unimproved latrines, paid little attention to personal hygiene, and neglected the cleanliness of their surroundings. Waterborne diseases such as diarrhea, dysentery, and jaundice were common. The horrors of arsenic contamination were also evident, as residents unknowingly used arsenic-contaminated water for all purposes, including cooking. Many relied on river basins and pond water for cooking.

Pic:26- Raised platform during flood

The village had 134 families with a total population of 812 people, including 421 women, 391 men, 336 children under 18, and 10 disabled individuals. Socioeconomic classifications included 30 rich, 27 middle-class, 33 poor, and 44 extremely poor households.

The Public Health Engineering Department conducted water testing in the area and marked arsenic-contaminated tube wells with red paint, advising against their use for cooking or drinking. However, many villagers ignored these warnings. The Asia Arsenic Network (AAN), under the "Ensure Safe Water for All" GOB-UNICEF project, stepped in to address the problem.

AAN conducted awareness meetings to educate villagers on the risk of arsenic contamination, the importance of hygiene, and safe water practices. A detailed map of the area was created to document socioeconomic conditions, water sources, and hygiene practices. This revealed the extent of the problems, prompting the community to prioritize solutions. Accordingly an action plan was developed, and locations for water facilities were selected based on fairness and need. Following recommendations from the Union Parishad chairman, two deep tube wells were installed under the GOB-UNICEF project. Additional deep tube wells were later installed by DPHE and other stakeholders, providing arsenic-free water for cooking and drinking.

Public awareness efforts led to significant improvements in hygiene practices. Families abandoned unimproved latrines and open defecation. The CBO committee installed signboards to discourage unsanitary practices, a measure verified by local officials.

On February 26, 2024, UNICEF officials and government representatives visited the CBO. They praised AAN's awareness activities and the installation of deep tube wells with raised platforms, which provided clean, arsenic-free water even during floods. However, the community highlighted that during floods, existing tube wells with raised platforms could not meet the demand for safe water, urging the installation of additional facilities.

From mid-June to July 2024, floods damaged approximately 75% of the CBO's improved latrines. Families were displaced, and income was disrupted. Despite this, the raised-platform tube wells installed by GOB-UNICEF ensured access to safe water for 200–230 households across two CBOs. Residents used banana rafts and boats to collect water for cooking and drinking.

The importance of raised-platform tube wells during floods became evident, and community members called for more installations to address water shortages during such crises.

Pic:27- Raised platform during flood

On June 28, 2024, as floodwaters receded, UNICEF representatives visited Kumairmati CBO to assess the situation. They inspected the raised-platform tube wells, water safety plans, and the overall condition of the community. Discussions highlighted the need for additional raised-platform tube wells to ensure uninterrupted access to safe water.

UNICEF representatives and community leaders acknowledged the success of the raised-platform tube wells as a model solution for flood-prone areas. Moving forward, similar installations in other areas were recommended to ensure long-term water security and community resilience.

The collaboration between GOB, UNICEF, AAN, and the local community has proven effective in addressing arsenic contamination and water scarcity. Raised-platform tube wells have emerged as a sustainable solution for providing safe water, even in challenging conditions, setting a standard for future initiatives.

4 Target and Achievements summary

Project target and achievements summary for the period from 20th October 2022 to 9th December 2024 given in below:

Note: 90% above is considered achieved, PwD- Person with Disability

Activities		Total	Oct'22-to December-24 Achievement	Participants					Remarks
				Male	Female	Total	Achieve%	PwD	
Facilitation and sensitization workshops to orient LGIs and WASH stakeholders at the local levels on the proposed project plan and arsenic-safe union concept.	Inception/Planning workshop at Upazila level	1	1	39	1	40	100%	0	Achieved
	Union level rapport building and Planning meeting	6	6	105	21	126	100%	0	Achieved
	Staff orientation and foundation training on WASH, CLTS,	1	1	17	6	23	100%	0	Achieved
	Refreshers Training	1	1	15	9	24	100%	0	Achieved
Community social mapping and community action planning using community-led approaches	Social maps and Community Action Plan (CAP) prepared	259	259	70,777	69,352	140,129		298	Achieved
	Follow-up meeting to implement the action plan / CAP (259 *5, Per CBO -5)	1,295	2,880	11012	11659	22671		0	Achieved
	Proportion (%) of actions on the action plan (CAP) fully implemented.	259	259	70,777	69,352	140,129		N/A	Achieved
Facilitate equity-based site selection for safe water supply by using agreed site selection criteria	Training conducted with support from NGOs	1	1	25	0	25	100%	0	Achieved
	Water points that followed equity-based site selection criteria	572	572	19,154	19,498	38,652		0	Achieved
	List of arsenic-safe water points targeting pro-poor and unserved communities submitted to DPHE (After verification)	572	572	19154	19498	38652	100%	0	Achieved

Activities		Total	Oct'22-to December-24 Achievement	Participants					Remarks
				Male	Female	Total	Achieve%	PwD	
Provide support to DPHE and LGIs through community mobilization during the installation of water facilities	The proportion of installed safe water systems that are functional Kanaighat	563	563	14,178	15,877	30,055	100%	0	Achieved
	Installed water points with skilled caretakers and an active O&M system	563	563	580	518	1098	100%	0	Achieved
	Community based non-functional arsenic safe water points with GPS & cost estimate	66	66	N/A	N/A	0	100%	N/A	Achieved
	Rehabilitated water options with GPS	66	66	2,640	2,896	5,536	100%	0	Achieved
	Rehabilitated WPs confirmed arsenic safe using a field test kit	66	66	N/A	N/A	0	100%	N/A	Achieved
	Caretakers trained on O&M of water systems (Including Rehav.)	1,200	1,156	617	539	1,156	96.33%	0	Achieved
	Caretakers trained on CR water safety planning	866	866	0	0	0	100%	0	Achieved
	Water points where caretakers conduct and document a minimum of one preventive check and maintenance of the water system each month 91 +32	70	70	0	0	0	100%	0	Achieved
	User groups oriented on CR-WSP	866	866	4134	9928	14062	100%	55	Achieved
	HHs practicing HH-level water treatment and safe storage (collect water in clean pot, covered with lid, preserve in raised places, treatment and other safe handing practices)	10,000	7,648	0	0	26579	76.48%	0	Partial Achieved
	Safe water points with CR-WSP developed with at least two key actions implemented	630	589	0	0	0	93.5%	0	Achieved

Activities		Total	Oct'22-to December-24 Achievement	Participants					Remarks
				Male	Female	Total	Achieve%	PwD	
Capacity building of the DPHE, LGIs and communities on raising awareness on WASH issues including water safety plan, arsenic, sanitation, and hygiene	Trainings conducted on WASH, WSP, Arsenic orientation	7	7	65	68	133	100%	0	Achieved
	Monitoring visits conducted by LGIs at the field level	7	7	N/A	N/A	0	100%	N/A	Achieved
	Local Entrepreneurs trained	18	18	18	0	18	100%	0	Achieved
	Local entrepreneurs implementing a business model for O&M of water systems	6	**6**	0	0	0	100%	0	Archived
	Communities with leaders trained on WASH, Arsenic, WSP	518	518	282	236	518	100%	0	Achieved
	CBO meeting conducted on community action plan implementation progress	3000	3024	9397	8451	17848	100%	0	Achieved
	WSP Corner established	7	7	N/A	N/A	0	100%	0	Achieved
	Water systems with arsenic testing were conducted	500	148	N/A	N/A	0	29.60%	0	Target 50%
	Water system with microbiological test conducted with the past 3 months	25	25	N/A	N/A	0	100%	0	Achieved
	People reached with the full complement of services (safe water, arsenic, and WSP, sanitation, and hygiene)	52,272	52,272	N/A	N/A	101,952	100%	0	Achieved
	HHs reached with full complement of services (safe water, arsenic and WSP, sanitation and hygiene)	17784	17784	N/A	N/A	0	100%	0	Achieved

Activities		Total	Oct'22-to December-24 Achievement	Participants					Remarks
				Male	Female	Total	Achieve%	PwD	
	HHs switched to arsenic-safe wells through motivation	6,955	6,955	N/A	N/A	38,976	100%	0	Achieved
	HHs collect water in a clean pot, covered with a lid and preserve it in raised places	2868	2868	0	0	16,053	100%	0	Achieved
	HHs that converted from unhygienic to hygienic/improved latrine through motivation	18,764	14868	41949	40970	82919	100%	198	Achieved
	HHs that installed new and improved latrines through motivation	2180	2213	6004	5727	11731	100%	56	Achieved
	HHs that installed Handwashing devices	17675	17,675	49253	48991	98,244	100%	268	Achieved
	Household members can demonstrate effective handwashing with soap and running water	20,917	22,794	N/A	N/A	124,803	100%	0	Achieved
Coordinate with relevant Govt. departments and stakeholders through quarterly/monthly meetings	Quarterly progress meetings with team and counterparts (DPHE, UNICEF, NGO)	40	26	280	93	373	65%	0	Achieved
	WATSAN Committee meetings (Union+Upazila wise- Half Yearly)	48	40	538	230	769	83.3%	0	Achieved
	Case studies and Human-interest stories	24	8	N/A	N/A	N/A	91.67%	0	Achieved
Demonstrate arsenic-safe union models including Community-led total sanitation (CLTS) in selected unions	Communities declared arsenic safe with ODF	259	128	N/A	N/A	0	100 %	0	Achieved
	Villages declared arsenic safe with ODF	163	63	N/A	N/A	0	100 %	0	Achieved
	Unions declared arsenic safe with ODF	6	0	0	0	0			
	# of Wall paintings done	54	54	0	0	0	100%		Achieved
	# of billboards installed	6	6	0	0	0	100%		Achieved

5 Activities by other stakeholders

AAN provided support to Esolve for the site selection process of PWSS and the feasibility survey process. Additionally, AAN assisted the KTH-Dhaka University team in organizing a technocrat capacity-building training in Kanaighat upazila, including support for driller list preparation. Moreover, AAN had three representatives participate in a facilitation training organized by ITN-BUET on systematic and scientific approaches for targeting poor and unserved people in arsenic-affected areas, resulting in the successful acquisition of certificates.

In the context of flood-prone areas, AAN selected 56 sites for the installation of double-platform Deep Tube Wells (DTWs) and submitted the list to the local DPHE for crosschecking.

The Esolve team visited Balaganj upazila on June 17, 18, and 19, 2023, tentatively confirming a location for a surface water-based water treatment plant. The UNO and AC Land, along with the Upazila surveyor, were present during these visits and confirmed that the chosen location was suitable for the treatment plant. The Esolve team collected the necessary information to finalize the design, conducting interviews with 100 households about the sustainability of the Mini Pipe Water Supply Systems. The AAN team provided the necessary support as requested.

The KTH-Dhaka University team organized a two-day (May 24 and 25, 2023) capacity-building training for technocrats in Balaganj Upazila. On Day 1, participants included UNICEF zonal office representatives, government officials, LGI representatives, NGOs, and local social workers. Day 2 was dedicated to local drillers listed in the training.

ITN-BUET organized a facilitation training on July 8-11, 2023, focusing on systematic and scientific approaches for targeting poor and unserved people in arsenic-affected areas at DPHE Sylhet.

6 Challenges and Way Forward

According to UNICEF consultant Dr. Shamim Uddin, several important findings were reported which included some areas are now suitable for DTWs installation for gravel layers, annual and flash flooding, Arsenic contamination at deep aquifer in some areas, low water table, Screening for arsenic contamination in tubewells conducted but report not available, hard to reach some areas in hour belt, etc. According to AAN also similar challenges in the working areas and noted below:

1. Groundwater Suitability Challenges:
   - Challenge: Several areas face challenges in Deep Tube Well (DTW) installation due to the presence of gravel layers, annual and flash flooding, hard-to-reach areas, household distributions, arsenic contamination in deep aquifers, and a low water table.
   - Implications: Partial suitability of DTWs in specific unions due to gravel layers, insufficient water quantity in dry seasons, and the prevalence of flooding impact water access.
2. Water Quality and Arsenic Contamination Issues in Kanaighat and Balaganj:
   - Challenge: Arsenic contamination reported above the Bangladesh drinking water standard in 8.33% of installed DTWs in Kanaighat upazila, reflecting a similar trend in Balaganj.
   - Implications: The challenge of ensuring safe drinking water due to arsenic contamination poses health risks and necessitates effective mitigation strategies.
3. Water Table and Aquifer Challenges in Balaganj:
   - Challenge: Balaganj Upazila faces a significant problem with a low water table, impacting both deep and shallow tubewells, and a absence of spare parts affecting the functionality of tara tubewells.
   - Implications: The low water table during the dry season affects water availability, and the inactivity of tubewells requires timely solutions for sustainable water sources.
4. Accessibility and Communication Challenges in Hoar Belt Areas:
   - Challenge: Unions under the hoar belt in Balaganj and Kanaighat are challenging to reach, with scattered households and difficult communication during the dry season due to the absence of permanent roads.

- Implications: Difficulties in reaching and communicating with households impact the implementation of water projects and require alternative transportation strategies during different seasons.

5. Water Quality Testing Constraints:
   - Challenge: Water quality testing for newly installed tubewells is not possible locally, posing a challenge in ensuring the safety and potability of water sources.
   - Implications: The inability to conduct local water quality tests hinders the immediate assessment of water safety, potentially affecting public health.
6. Delayed Activities and Backlog Adjustments:
   - Challenge: Initial preparations, including staff requirements, manual finalization, and CAS format development, took longer than planned, causing delays in various project activities.
   - Implications: The backlog in project activities requires efficient adjustment during the 3rd quarter, with the anticipation of finding appropriate solutions to overcome water quality, low water table, and aquifer challenges.
7. Incomplete Water Testing Reports:
   - Challenge: DPHE completed tubewell screening for both areas, but the reports have not yet been published, leading to uncertainties and lack of awareness among households regarding screening results.
   - Implications: Incomplete testing reports hinder informed decision-making about water sources, creating a gap in community awareness and potentially affecting public trust in water safety.
8. Sanitary Access and Hygiene Practice Challenges:
   - Challenge: In the targeted upazilas, the prevalence of open defecation, unimproved latrines, and the absence of handwashing devices pose significant challenges to achieving optimal sanitary access and hygiene practices.
   - Implications: The widespread practice of open defecation contributes to environmental pollution, posing health risks to the community.
   - Unimproved latrines may compromise sanitation, leading to hygiene-related illnesses and affecting overall community well-being.
   - The absence of handwashing devices hinders the adoption of proper hygiene practices, potentially contributing to the spread of diseases.

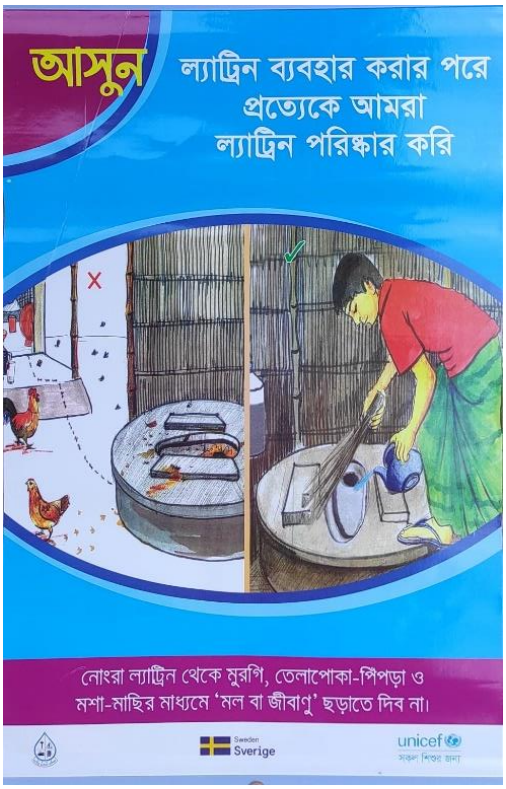
Addressing a myriad of challenges, the way forward involves a comprehensive strategy to ensure sustainable water access and hygiene practices. Initiatives include conducting feasibility studies for Deep Tube Well (DTW) installation, implementing arsenic mitigation strategies, investigating solutions for low water tables, and developing alternative transportation strategies for hard-to-reach areas. Additionally, streamlining delayed activities, advocating for local water quality testing capabilities, and transparently publishing tube well screening reports are vital steps. To tackle sanitary challenges, community-led initiatives, improved latrine promotion, and handwashing device availability campaigns are essential for fostering healthier hygiene practices. The integrated approach aims to overcome each challenge systematically, promoting water safety, accessibility, and improved sanitation across the targeted upazilas.

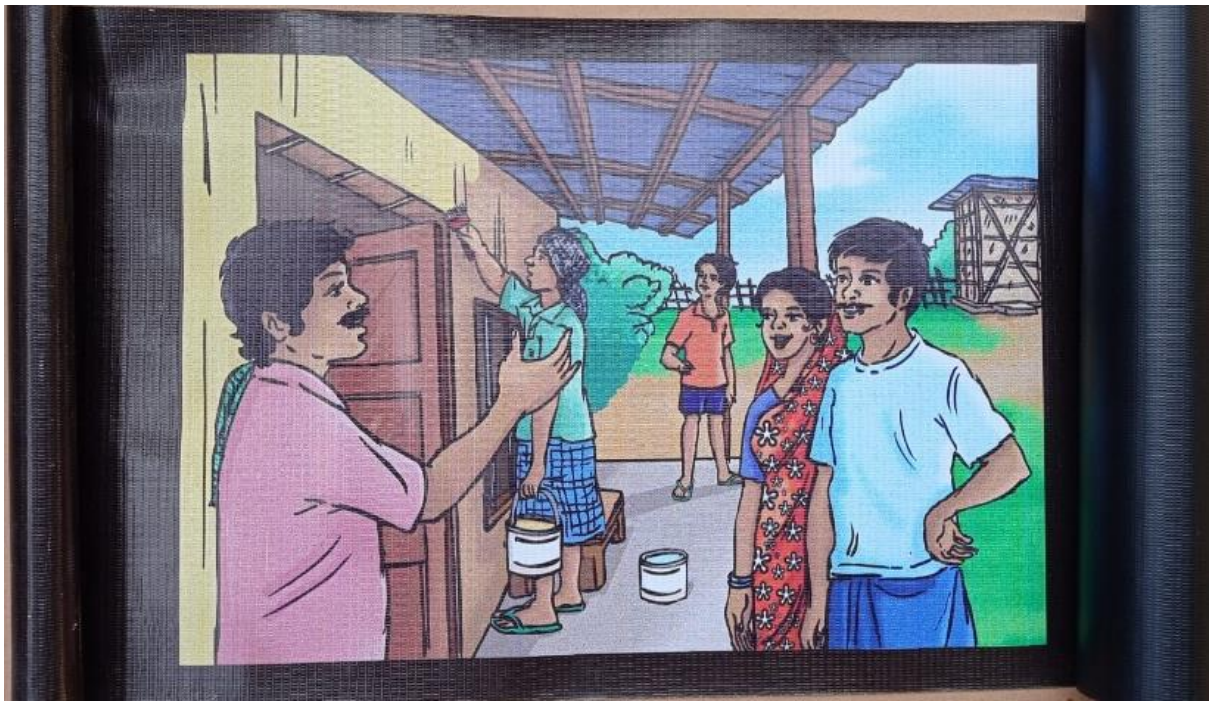
To tackle the low water table issue, the Department of Public Health Engineering (DPHE) is installing deep tube wells with submersible pumps. They are also searching for suitable water points in areas with geological challenges. The project team is actively encouraging communities to upgrade their sanitation systems using the CLTS approach. Additionally, in flood-affected areas supported by the GoB-Unicef project, 40 double-platform tube wells have been installed to provide access to safe water during flooding.

9. Communication Materials:

Various types of communication materials were utilized for awareness programs, training sessions, and courtyard meetings. These materials were designed and provided by UNICEF to effectively convey key messages.

Additionally, wall paintings were created in each ward, and a billboard was installed in every union to ensure wider outreach. Below are some pictures of the communication materials used:






আসুন
খাবার আগে এবং
ল্যাট্রিন ব্যবহার করার পরে
সাবান দিয়ে দুই হাত ঘষে ধুই
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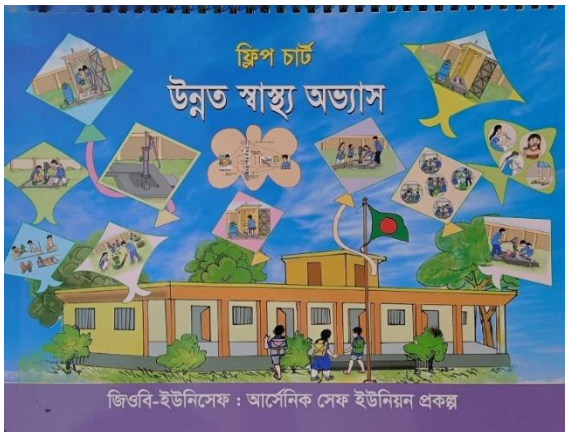
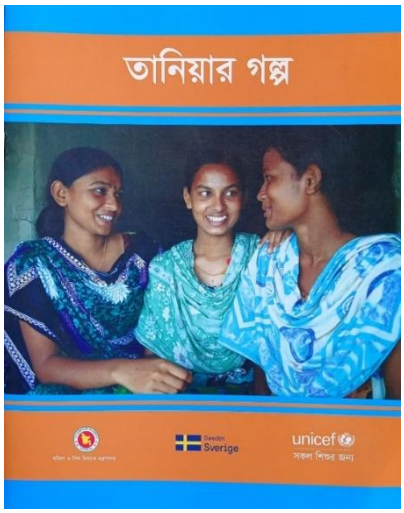
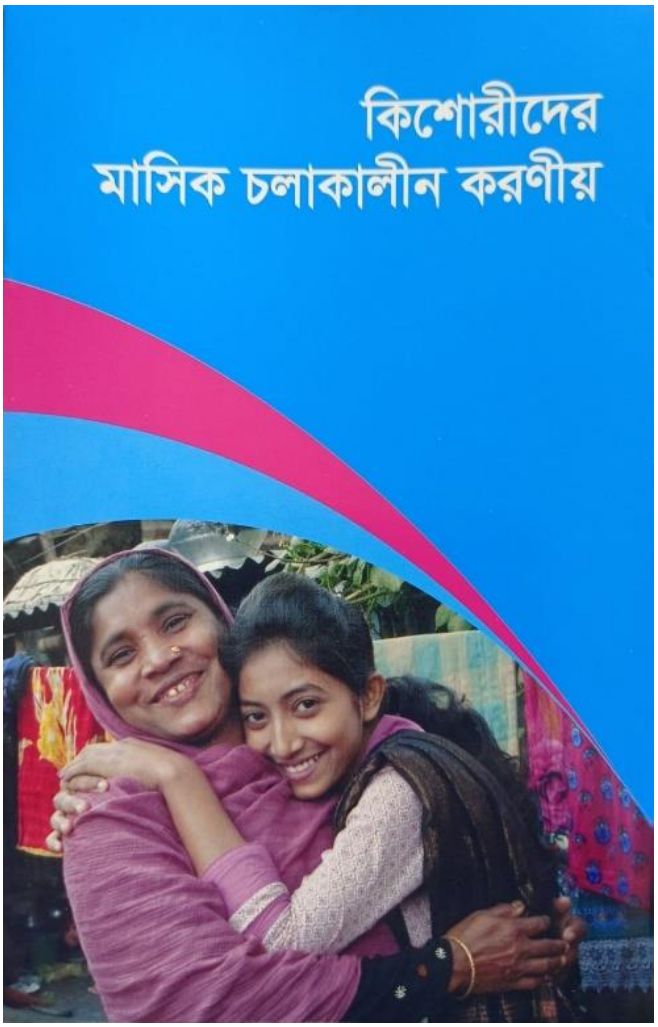
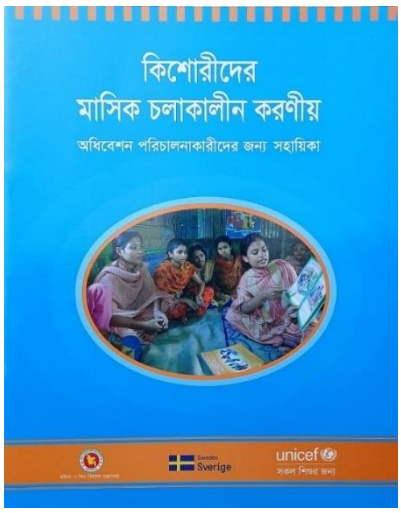
হাত ধোয়ার নিয়ম জানি
আমরা সবাই তা মানি
Sweden
Sverige
unicef
সকল শিশুর জন্য


ফ্লিপ চার্ট
উন্নত স্বাস্থ্য অভ্যাস
জিওবি-ইউনিসেফ : আর্সেনিক সেফ ইউনিয়ন প্রকল্প


তানিয়ার গল্প
Sverige
unicef
সকল শিশুর জন্য


কিশোরীদের
মাসিক চলাকালীন করণীয়


কিশোরীদের
মাসিক চলাকালীন করণীয়
অধিবেশন পরিচালনাকারীদের জন্য সহায়িকা
Sverige
unicef
সকল শিশুর জন্য


পান করবো নিরাপদ পানি
সুস্থ-নিরোগ থাকবো জানি
Sweden
Sverige
unicef
সকল শিশুর জন্য
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পানির উৎস
পরিষ্কার ও নিরাপদ রাখুন
সংগ্রহ করুন
পরিষ্কার পাত্রে
বহন করুন
পাত্রের মুখ ঢেকে
সংরক্ষণ করুন
ঢেকে রেখে
পরিবেশন ও পান করুন
আঙুলে না লাগিয়ে
উৎস থেকে ব্যবহার পর্যন্ত পানি নিরাপদ রাখার উপায়সমূহ
১। উৎস
• পানির উৎসের চারিদিক পরিষ্কার রাখতে হবে
• নলকূপ নিরাপদ উঁচু স্থানে বসাতে হবে যা বন্যার পানি থেকে ঝুঁকিমুক্ত থাকবে
• নলকূপ থেকে কমপক্ষে ১০ মিটার বা ৩০ ফুট দূরত্বে পায়খানা স্থাপন করেতে হবে
• নলকূপের উপরে সম্ভব হলে ঢাকনা ব্যবহার করতে হবে
• পাতা ঝরে এমন গাছের নিচে নলকূপ না বসানোই ভাল
• কাছে কোন পঁচা ডোবা, গর্ত বা ময়লা আবর্জনার স্তূপ যেন না থাকে
৩। পরিবহন
• পাত্রের মুখ ওড়না বা শাড়ির আঁচল দিয়ে ঢাকা যাবে না।
• পরিষ্কার ঢাকনা ব্যবহার করতে হবে।
• পাত্রের মুখের চেয়ে বড় বা সমান ঢাকনা ব্যবহার করতে হবে
• লক্ষ্য রাখবেন যেন কোনোভাবেই হাত পাত্রের পানির মধ্যে না যায়
২। সংগ্রহ
• পানির পাত্র পরিষ্কার হতে হবে
• হাত পরিষ্কার হতে হবে
• কোনোভাবেই পানির মধ্যে হাত দেয়া যাবে না
• নলকূপের মুখ নিয়মিত পরিষ্কার করতে হবে
৪। সংরক্ষণ
• পানির পাত্র শুকনা, পরিষ্কার ও উঁচু স্থানে ঢাকনা দিয়ে রাখতে হবে।
• পানির পাত্র নিরাপদ এবং সুবিধাজনক স্থানে রাখতে হবে
• শিশু এবং অন্যান্য পশুপাখি যেন পানি দূষিত করতে না পারে সে বিষয়ে নজর রাখতে হবে
৫। গ্রহন বা ব্যবহার
• পরিষ্কার পাত্র বা গ্লাসে পানি পান করতে হবে
• পানি পান করার সময় পরিষ্কার হাতে গ্লাস ধরতে হবে
• গ্লাসের ভিতরে হাত দেয়া যাবে না

Billboard at Union level

Wall painting at ward level

10. Conclusion

Upazila level inception workshop and Union level rapport building and planning meeting completed where all local stakeholders participated and able to know the project goals and its activities, a timeframe which will ensure better coordination and implementation of project activities. All stakeholders and the Implementing Partner work closely together to ensure that identified project activities are executed promptly to avoid delay. On the other hand central-level coordination meeting was completed and IPs reported progress, challenges, and the next work plan. It will support progress monitoring and IPs' good approaches to follow by others and rectify mistakes for the upcoming period. A review of the overall situation of the 6 unions in the work area shows that there are various barriers to achieving the expected results, sparsely the land Deep wells are not possible due to the presence of underlying rock. In the mentioned area water is not available in shallow tube wells throughout the year. And in many cases, there is an excess of arsenic.

If approved water points are established in the yellow areas marked on the map, a significant part of the work area will come under safe water free of arsenic.

11. Annex

- List of proposed sites included in Annex-1
- List of Double Platform Water Points included as Annex-2
- List of Rehabilitated Water Points included as Annex-3
- List of trained caretakers as Annex-4
- List of operation and maintenance tools distribution attached as annex-5
- List of Arsenic-safe communities and villages with ODF in Annex-6
- Distribution list of CSA tools as Annex-7
- List of places for wall painting as Annex -8
- Monitoring format as Annex-9